Annexure A. 7.1

QUANTITY ABSTRACT (ESTIMATE WISE)
ABSTRACT BILL OF QUANTITIES
DRAFT TENDER SCHEDULE
DETAILED COST ESTIMATE
RATE ANALYSIS

Bruhat Bangalore Mahanagara Palike

Excecutive Engineer Yelahanka Division

Comprehensive Development of Roads and Drains at Sai Nagara Phase 1, 2, Yelahanka 208, 407, 707 SFS, Attur village and Chitra layout in Attur ward no 03 of Yelahanka division (Package No. 02)

1	Comprehensive Developments of Roads and Drains in Sai Nagar Phase - 1 and 2 and surrounding areas in Attur ward no-03
2	Compheresive Development of Balance Main and cross roads of 208, 407 and 707 SFS and surrounding areas in Attur Ward no-03
3	Compherensive Development of Attur Layout, Attur Village Main and Cross roads in Attur Ward no-03
4	Compheresive Development of Chitra layout and surrounding areas in Attur Ward no-03

Quantity Abstract (Estimate Wise)

Sl No	Description of Item	Unit	Comprehensive Developments of Roads and Drains in Sai Nagar Phase - 1 and 2 and surrounding areas in Attur ward no-03	Compheresive Development of Balance Main and cross roads of 208, 407 and 707 SFS and surrounding areas in Attur Ward no-03	Compherensive Development of Attur Layout, Attur Village Main and Cross roads in Attur Ward no-03	Compheresive Development of Chitra layout and surrounding areas in Attur Ward no-03	Total Quantity as per Estimation	Rate, Rs	Amount, Rs
			1	2	3	4			
1	KSRRB 300-1. Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications	Cum	0.00	905.23	4127.28	995.60	6028.11	215.28	1297731.09
2	Filling in foundation with granite/trap broken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead up to 50m and lift 1.5m complete as per specifications. Data Rate a) 40mm Jelly	Cum	0.00	0.62	1.24	0.74	2.60	1901.00	4950.20
3	b) 20mm Jelly	Cum	0.00	0.62	1.24	0.74	2.60	1901.00	4950.20
4	c) Coarse sand.	Cum	0.00	0.47	0.93	0.56	1.95	2651.00	5177.40
5	d) Fine Sand	Cum	0.00	0.31	0.62	0.37	1.30	2651.00	3451.60
6	e) 12.5mm chips	Cum	0.00	0.47	0.93	0.56	1.95	1901.00	3712.65

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			1	2	3	4			
7	Supplying, laying and jointing HDPE pipes of specified grade and conforming to IS 4984- 995 with latest amendments and conveyingto work site including loading and unloading at both destinations and rolling and lowering into trenches, laying true to line and jointing of pipes and specials, giving hydraulic test as per relevant ISS with all lead and lifts including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation, testing and commissioning. The rate is exclusive of required specials and fittings wherever necessary like saddle Tee, stub ends, flanged sets, bends, reducers etc. complete (Contractor will make his own arrangements for procuring water for testing) etc. for : HDPE Grade PE80-PN6.0, 630 mm dia. (Perforated Pipe for Rain Water Harvesting Pit)	Rmt	0.00	9.00	18.00	10.80	37.80	10822.32	409083.70
8	Providing of Geonets for Rain Water Harvesting pit on top of the filter media as specified indrawings or as approved by Engineer Incharge.	Sqm	0.00	1.55	3.10	1.86	6.51	71.03	462.41
9	KSRRB M2100-10. Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications.	Cum	0.00	151.36	595.35	165.38	912.09	5421.90	4945233.66
10	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. With 20mm and sown size granite metal course aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compcted for walls and bottom including centring shuttering cost of material HOM of machinary curing etc., complete execluding cost of steel as per MORTH specification.	Cum	0.00	268.88	1193.42	333.32	1795.63	7070.20	12695434.95
11	KSRRB - M2300-14: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, palcing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining memebrs wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.	Tn	0.00	17.43	71.88	20.60	109.92	73992.24	8133244.78

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12	Providing and Fixing pre cast covering Slab 100mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge.	Sqm	0.00	644.40	2967.75	783.00	4395.15	2337.00	10271455.55
13	Providing and fixing RCC precast cover slab of 250mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge.	Sqm	0.00	100.80	21.60	46.80	169.20	5418.00	916725.60
14	Providing and fixing pre cast solid cement concrete kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting including formwork, curing, including cost of materials, labour charges of machinery, loading and unloading, lead and lift, transportation ete.,complete.	Nos	0.00	1591.00	0.00	0.00	1591.00	432.48	688075.68
15	Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications.	Sqm	0.00	286.40	0.00	0.00	286.40	84.80	24286.72
16	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications.	Cum	689.31	755.76	0.00	251.40	1696.47	63.94	108472.29
17	KSRRB 300-46. Scarifying by mechanical means stone metal crust 50mm to 100mm thick by along with 20mm premix carpet / surface dressing and stacking of old serviceable materials including cost of all labour charges, HOM complete as per specifications.	Sqm	9058.80	717.50	0.00	1538.70	11315.00	41.34	467762.10
18	KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3	Sqm	1153.70		0.00	0.00	1153.70	6.36	7337.53

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19	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision	Cum	1023.98	790.77	0.00	305.10	2119.85	1994.92	4228921.19
20	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications	Cum	2743.56	1034.15	0.00	739.38	4517.09	2001.28	9039951.87
21	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.	Sqm	11928.50	4496.30	0.00	3214.70	19639.50	29.68	582909.36
22	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM complete as per specifications.	Sqm	2342.30	5603.50	0.00	2552.90	10498.70	5.30	55643.11
23	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications.	Sqm	14270.80	10099.80	0.00	5767.60	30138.20	12.72	383357.90
24	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen.	Cum	647.67	280.85	0.00	186.26	1114.79	6407.70	7143220.66

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25	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)	Cum	468.71	403.99	0.00	215.32	1088.02	7537.66	8201094.68
26	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications.	Sqm	607.60	364.90	0.00	243.40	1215.90	454.74	552918.37
27	KSRRB M800-35. Supply and Installtion of Moulded Shank Raised Pavement Markers made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 – DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 mm and height not less than 30 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer.	Nos	810.00	524.00	0.00	264.00	1598.00	357.22	570837.56

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28	KSRRB M200-24. Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials stacking serviceable and unserviceable materials seperately complete as per specifications. Loading and unloading.	Cum	0.00	2016.40	0.00		2016.40	973.42	1962799.22
29	KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. Clause 601of MORTH V Revision and IS 456 Table-5. with OPC at 150 kg/cum and coarse aggregate .86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor.	Cum	0.00	1228.23	0.00		1228.23	3800.10	4667396.82
30	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound.	Cum	0.00	1228.23	0.00		1228.23	5210.96	6400257.40
							Construction Cost		83776857.26
							12% GST		10053222.87

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	Technical Sanction		1	2	3	4			
	Accorded for RS.100% Collaterals							Tender Premium 5%	4181842.86
	Head of A/C P.3075							DPR and PMC Cost Including GST	1971000.00
	CER NO : 57 Dt:..							Sub Total	99997922.99
								Miscellaneous	2077.01
								Grand Total	100000000.00

CE (PMC)

Certificate

1. The workspot was inspected and works is found to be necessary.
2. The rates adopted based on the PWD SR,Bangalore circle for year 2018-2019 and Data Rates.

Assistant Engineer

Asst. Executive Engineer

Executive Engineer,

Administrative Sanction for Rs. 1000.00 Lakhs
[Rupees Ten Crore only]
is accorded under head P-3075
B'lore City in-charge Minister
Discretionary Grants
Registered as CE No. 80 Subject
to conditions contained in enclosed memo
No. BBMP/EE/Ynk/AS/80/20-21 Dt. 27/10/2020

Executive Engineer